

Appl. No. 10/717,582
Amendment dated: April 28, 2005
Reply to OA of: March 30, 2005

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1(currently amended). A contact hole forming method comprising the steps of:
providing a substrate;

forming a plurality of proper operation layers as required on said substrate;

forming a nitride layer on the uppermost layer of said operation layers;

forming photoresist on said nitride layer to define a position to be formed into a contact hole;

forming the contact hole; by ~~etching; and~~

removing said photoresist; and

removing said nitride layer.

2(original). The method as claimed in Claim 1, wherein the step of removing said nitride layer is performed by etching, and a corresponding portion of one of said operation layers not removed in the step of forming the contact hole is removed simultaneously.

3(original). The method as claimed in Claim 2, wherein said one of said operation layers, of which the corresponding portion is not removed in the step of forming the contact hole, is a nitride layer.

4(original). The method as claimed in Claim 3, wherein said one of said operation layers, of which the corresponding portion is not removed in the step of forming the contact hole, is a cap nitride layer for a gate electrode.

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5(original). The method as claimed in Claim 1, further comprising a step of using photoresist to protect portions not to be eroded in said step of removing said nitride layer before the removing step.

Claims 6-8(canceled).

9(original). A method for forming contact holes including a gate contact hole and a non-gate contact hole, said method comprising steps of:

providing a substrate;

forming a plurality of operation layers on said substrate, the operation layers at the portion to be formed into the gate contact hole including at least a gate metal and a cap nitride layer formed on the gate metal;

forming a nitride layer on the upper most layer of the operation layers;

forming photoresist on said nitride layer to define positions to be formed into the respective contact holes;

removing portions of the respective operation layers corresponding to the position to be formed into the non-gate contact hole to form the non-gate contact hole and removing portions of the operation layers above the cap nitride layer corresponding to the position to be formed into the gate contact hole;

filling the non-gate contact hole with photoresist; and

removing the portion of the cap nitride layer corresponding to the position to be formed into the gate contact hole to form the gate contact hole and removing said nitride layer.

10(new). The method as claimed in claim 1, wherein the step of forming a plurality of proper operation layers comprising forming a conducting layer, forming a gate metal on said conducting layer, forming a cap nitride on said gate metal, forming an oxide layer on said cap nitride; and forming a thin conductive layer on said oxide layer; and wherein the step of forming a contact hole comprising removing portions of

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the nitride layer, thin conductive layer and oxide layer corresponding to the position to be formed into the contact hole before removing the photoresist, and removing a portion of said cap nitride corresponding to the position to be formed into the contact hole after the photoresist is removed, so as to form a gate contact hole.

11(new). The method as claimed in claim 10, wherein said conducting layer is a poly-silicon layer.

12(new). The method as claimed in claim 10, wherein said thin conducting layer is a thin poly-silicon layer.